

REMARKS / ARGUMENTS

I. General Remarks and Disposition of the Claims

Please consider the application in view of the following remarks. Applicants thank the Examiner for his careful consideration of this application, including the references that Applicants have submitted in this application and, pursuant to Manual of Patent Examining Procedure § 609.02, all references submitted in the patent applications to which this application claims priority under 35 U.S.C. § 120.

At the time of the Office Action, claims 21, 29, 31, 37, and 44-48 were pending in this application. Claims 21, 29, 31, 37, and 44-48 were rejected in the Office Action. By this paper, claims 21, 29, 31, 44-46, and 48 have been amended, claims 37 and 47 have been canceled, and claims 49-53 have been added. These amendments are supported by the specification as filed. All the amendments are made in a good faith effort to advance the prosecution on the merits of this case. It should not be assumed that the amendments made herein were made for reasons related to patentability. Applicants respectfully request that the above amendments be entered and further request reconsideration in light of the amendments and remarks contained herein.

II. Remarks Regarding Information Disclosure Statement

With respect to the information disclosure statement filed on October 13, 2008, the Office Action states:

The information disclosure statement filed 13 October 2008 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the International Search Reports and Opinions on page 7 of the IDS are improperly cited and do not include a proper publication date and a place of publication.

The remaining references in the above denoted IDS that have not been considered were not considered for one of the following reasons:

- (1) reference previously cited and is already of record,
- (2) the reference does not correspond to the foreign document presented and is thus not properly cited and the cited document was not provided, and
- (3) the document does not appear to be relevant to the invention and applicants have not set forth any relevance for the approximately 145 documents in the IDS.

It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any resubmission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

(Office Action at 2-3.) At the outset, Applicants note that it is not their intention to burden the Examiner with information, but rather to fully comply with their duty of disclosure. Applicants thank the Examiner for his consideration of the references that have been considered.

Applicants respectfully request that the Examiner consider the International Search Report and Opinions on page 7 of the Information Disclosure Statement. Contrary to the Examiner's allegations, a proper publication date for each of these references was provided on the Information Disclosure Statement. Furthermore, Applicants respectfully request the Examiner consider the foreign reference EP0506934. Although the Examiner alleges that the reference does not correspond to the submitted foreign document, Applicants note that the submitted foreign document (WO 92/08038) has taken the place of EP0506934 (as noted on the face of the WO 92/08038 publication). Thus, the submitted reference does correspond to the submitted foreign document. Therefore, Applicants respectfully request that the Examiner consider these previously submitted references.

III. Remarks Regarding Rejections Under 35 U.S.C. § 112

Claims 21, 29, 31, 37, and 44-48 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. With respect to this rejection, the Office Action states:

Independent claims 21 and 44 characterize phosphorous as a metal. Phosphorous is a non-metal as classically understood.

Applicants' alternative grouping in claims 21 and 44 are indefinite since the groupings employ the phrase; "selected from the group consisting of", and employ the conjunction "and" multiple times in the listing. See MPEP 2173.05(h). The claim may have multiple interpretations including a single salt or the requirement of two salts together. To the extent applicants intent is to claim the combination of two or more salts together, applicants should point out basis therefore in the original specification.

(Office Action at 4.)

First, although Applicants do not necessarily agree with the Examiner, Applicants have deleted phosphorous from the markush listing of metal portions in independent claims 21 and 44.

Second, Applicants respectfully submit that their alternative groupings in claims 21 and 44 are not indefinite. Although the Examiner is correct that the groupings employ the phrase “selected from the group consisting of” and employ the conjunction “and” multiple times, the claims are not indefinite. Rather, a person of ordinary skill in the art would understand that claims 21 and 44 are written to describe that the substantially non-radioactive tracking material may comprise a metal salt with a metal portion selected from a particular group or a metal salt selected from a particular group. Applicants believe that with this explanation, the Examiner’s concerns have been fully addressed. Therefore, Applicants respectfully request the withdrawal of this rejection.

IV. Remarks Regarding Rejections Under 35 U.S.C. § 102 or §103

A. Claims 44 and 46

Claims 44 and 46 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,849,590 issued to Anderson *et al.* (hereinafter “*Anderson*”). With respect to this rejection, the Office Action states:

Claims 44 and 46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Anderson, II et al, US 5,849,590. See column 3, lines 28-35; column 7, lines 45-53; column 8, lines 9-67, particularly lines 12, 14, 20, 21 and 49-67; and column 9, lines 32-37. Anderson, II et al clearly envisages the coating of particulates with a tag comprising salts of Ni, Mo, Cs, Ag and Au. Said disclosure reads on applicants claims. The preamble has been given no patentable weight as directed to an intended use of the compositions.

To the extent the Anderson, II et al reference differs in the disclosure of the tag coated particulate with sufficient specificity, it would have been obvious to one of ordinary skilled in the art at the time of applicants’ invention to employ known rare metal salts as taught in the Anderson, II et al reference for the advantageous tagging function as clearly contemplated therein.

(Office Action at 5.) Applicants respectfully disagree. Applicants submit that the Examiner has not shown that *Anderson* discloses, teaches, or suggests every element as recited in claims 44

and 46, as amended, as required to anticipate these claims under 35 U.S.C. § 102(b), or to obviate these claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

With respect to independent claim 44, *Anderson* fails to disclose a “proppant composition comprising particulate material that has been coated with a coating composition comprising a tracking composition and a resin composition.” Rather, to the extent *Anderson* may disclose coating particulates with metal salts, *Anderson* fails to disclose the use of a resin composition. *See Anderson*, entire disclosure. Nor has the Examiner provided any motivation to modify *Anderson* to teach this limitation. Therefore, Applicants respectfully submit that *Anderson* fails to teach, suggest, or disclose all of the elements of independent claim 44, as amended, as required to anticipate or obviate this claim.

Therefore, Applicants respectfully assert that independent claim 44 is allowable over *Anderson*. Claim 46 depends directly from independent claim 44 and thus includes all the elements of that independent claim. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of this rejection with respect to claims 44 and 46.

B. Claims 21, 29, 44, 45, and 47

Claims 21, 29, 44, 45, and 47 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,420,174 issued to Dewprashad *et al.* (hereinafter “*Dewprashad*”). With respect to this rejection, the Office Action states:

Dewprashad (column 1, lines 26 et seq; and claims) discloses it is common in the treatment of formations to coat or encapsulate proppants with natural or synthetic film forming materials. Dewprashad further discloses the resin coated proppant **in aqueous gelled fluids** formed by cross-linking rheological agents with conventional cross-linkers comprising aluminum and titanium cross-linking agents. These are conventionally in the form of soluble salts.

Dewprashad (column 2, lines 16 et seq; and claims 5 and 8) discloses oxidizing metal salts may be incorporated as gel breakers in the form of lithium hypochlorite.

The resin coated proppant would be further **gel coated** with a metal salt crosslinked gel and further including the gel breaker as lithium hypochlorite salt. Applicants do not distinguish the intended use. The use as a proppant with tracking material does not distinguish the proppant with the oxidizing salt as a gel breaker (In re Pearson 181 USPQ 641).

To the extent the Dewprashad reference differs in the disclosure of the gel breaker with sufficient specificity, it would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ known lithium oxidizing salts of among the other salts as gel breakers taught in the Dewprashad reference for the advantageous Dewprashad taught gel breaking function as clearly contemplated therein.

(Office Action at 6.) Applicants respectfully disagree. Applicants submit that the Examiner has not shown that *Dewprashad* discloses, teaches, or suggests every element as recited in claims 21 and 44, as amended, as required to anticipate these claims under 35 U.S.C. § 102(b), or to obviate these claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

With respect to independent claim 21, Applicants respectfully submit that *Dewprashad* fails to disclose "a particulate material that has been coated with a coating composition comprising a homogenous blend of a tracking composition and a resin composition." Rather, to the extent *Dewprashad* may disclose coated proppant, *Dewprashad* fails to disclose particulates that have been coated with a homogenous blend of a tracking composition and a resin composition. *See Dewprashad*, entire disclosure. Nor has the Examiner provided any motivation to modify *Dewprashad* to teach this limitation. Therefore, Applicants respectfully submit that *Dewprashad* fails to teach, suggest, or disclose all of the elements of independent claim 21, as amended, as required to anticipate or obviate this claim.

With respect to independent claim 44, Applicants respectfully submit that *Dewprashad* fails to disclose "wherein the tracking composition comprises a substantially non-radioactive tracking material selected from the group consisting of: a metal salt wherein a metal portion of the metal salt is selected from the group consisting of gold, silver, molybdenum, and vanadium; and a metal salt selected from the group consisting of barium bromide, barium iodide, beryllium fluoride, beryllium bromide, beryllium chloride, cadmium bromide, cadmium iodide, chromium bromide, chromium chloride, chromium iodide, cesium bromide, cesium chloride, sodium bromide, sodium iodide, sodium nitrate, sodium nitrite, potassium iodide, potassium nitrate, manganese bromide, zinc bromide, zinc iodide, sodium monofluoroacetate, sodium trifluoroacetate, sodium 3-fluoropropionate, potassium monofluoroacetate, potassium trifluoroacetate, and potassium 3-fluoropropionate." Rather, *Dewprashad* discloses oxidizing breakers such as lithium hypochlorite. *See Dewprashad*, col. 2, lines 16-26. *Dewprashad* fails to disclose the substantially non-radioactive tracking materials of Applicants' claims. *See*

Dewprashad, entire disclosure. Nor has the Examiner provided any motivation to modify *Dewprashad* to teach this limitation. Therefore, Applicants respectfully submit that *Dewprashad* fails to teach, suggest, or disclose all of the elements of independent claim 44, as amended, as required to anticipate or obviate this claim.

Therefore, Applicants respectfully assert that independent claims 21 and 44 are allowable over *Dewprashad*. Claims 29 and 45 depend either directly or indirectly from independent claim 21 or 44 and thus include all the elements of the independent claim from which they each depend. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of this rejection with respect to claims 21, 29, 44, and 45.

C. Claims 21, 29, 31, 37, and 44-48

Claims 21, 29, 31, 37, and 44-48 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over PCT Patent Application Publication No. WO 00/05302 (hereinafter "*Borden*"). With respect to this rejection, the Office Action states:

Borden (abstract; page 6, lines 3-16; page 7, line 1 et seq; page 13, lines 7-13; and at least claims 1 and 16) disclose composite proppants including a resole resin binder as a coating on the formed particle employing as catalyst the salts of divalent metals including nickel and zinc, e.g., zinc acetate.

To the extent the Borden reference differs in the disclosure of the resole catalyst with sufficient specificity, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ known nickel salts of among the other salts as resole catalyst taught in the Borden reference for the advantageous Borden taught catalyst function as clearly contemplated therein.

(Office Action at 7.) Applicants respectfully disagree. Applicants submit that *Borden* fails to disclose, teach, or suggest every element as recited in claims 21 and 44, as amended, as required to anticipate these claims under 35 U.S.C. § 102(b), or to obviate these claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

With respect to independent claims 21 and 44, Applicants respectfully submit that *Borden* fails to disclose, teach, or suggest "wherein the tracking composition comprises a substantially non-radioactive tracking material selected from the group consisting of: a metal salt wherein a metal portion of the metal salt is selected from the group consisting of gold, silver,

[lithium,] molybdenum, and vanadium; and a metal salt selected from the group consisting of barium bromide, barium iodide, beryllium fluoride, beryllium bromide, beryllium chloride, cadmium bromide, cadmium iodide, chromium bromide, chromium chloride, chromium iodide, cesium bromide, cesium chloride, sodium bromide, sodium iodide, sodium nitrate, sodium nitrite, potassium iodide, potassium nitrate, manganese bromide, zinc bromide, zinc iodide, sodium monofluoroacetate, sodium trifluoroacetate, sodium 3-fluoropropionate, potassium monofluoroacetate, potassium trifluoroacetate, and potassium 3-fluoropropionate.” Rather, to the extent *Borden* may disclose metal salts, *Borden* discloses “salts of the divalent ions of Mn, Zn, Cd, Mg, Co, Ni, Fe, Pb, Ca, and Ba.” See *Borden*, page 13, lines 7-8. *Borden* fails to disclose the substantially non-radioactive tracking materials of Applicants’ claims. See *Borden*, entire disclosure. Nor has the Examiner provided any motivation to modify *Borden* to teach this limitation. Therefore, Applicants respectfully submit that *Borden* fails to teach, suggest, or disclose all of the elements of independent claims 21 and 44, as amended, as required to anticipate or obviate these claims.

Therefore, Applicants respectfully assert that independent claims 21 and 44 are allowable over *Borden*. Claims 29, 31, 45, 46, and 48 depend either directly or indirectly from independent claim 21 or 44 and thus include all the elements of the independent claim from which they each depend. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of this rejection with respect to claims 21, 29, 44-46, and 48.

D. Claims 21, 29, 31, 37, and 44-48

Claims 21, 29, 31, 37, and 44-48 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,785,884 issued to Armbruster (hereinafter “*Armbruster '884*”) in view of U.S. Patent No. 4,677,187 issued to Armbruster *et al.* (hereinafter “*Armbruster '187*”). With respect to this rejection, the Office Action states:

Armbruster ‘884 (abstract; column 1, lines 9 et seq; column 3, lines 35 et seq; particularly lines 58-60; column 5, lines 8-24; examples and claims) disclose the coating of proppants with resol resin employing catalyst salts at up to 10 % by weight including at least phosphorous salts of ammonium or amines among others and furfuryl alcohol.

Armbruster ‘884 reference differs in the disclosure of the catalyst salt including the claimed species. Armbruster *et al* ‘187 discloses resole polymers employing furfuryl alcohol. Armbruster *et al* ‘187 (column 1, lines 49-54) teaches catalyst include Nickel.

Armbruster et al '187 characterizes the catalyst activity from the metal ion, suggesting any anion may be employed. Armbruster et al '187 exemplifies acetates.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ known acid salts of Ni among other salts as catalyst taught in the Armbruster et al '187 reference for the advantageous catalytic function taught and as clearly contemplated.

(Office Action at 7-8.) Applicants respectfully disagree. Applicants submit that the combination of *Armbruster '884* and *Armbruster '187* fails to disclose, teach, or suggest every element as recited in claims 21 and 44, as amended, as required to obviate these claims under 35 U.S.C. § 103(a). MPEP § 2142.

With respect to independent claims 21 and 44, Applicants respectfully submit that *Armbruster '884* fails to disclose, teach, or suggest “wherein the tracking composition comprises a substantially non-radioactive tracking material selected from the group consisting of: a metal salt wherein a metal portion of the metal salt is selected from the group consisting of gold, silver, [lithium,] molybdenum, and vanadium; and a metal salt selected from the group consisting of barium bromide, barium iodide, beryllium fluoride, beryllium bromide, beryllium chloride, cadmium bromide, cadmium iodide, chromium bromide, chromium chloride, chromium iodide, cesium bromide, cesium chloride, sodium bromide, sodium iodide, sodium nitrate, sodium nitrite, potassium iodide, potassium nitrate, manganese bromide, zinc bromide, zinc iodide, sodium monofluoroacetate, sodium trifluoroacetate, sodium 3-fluoropropionate, potassium monofluoroacetate, potassium trifluoroacetate, and potassium 3-fluoropropionate.” The Office Action states, “Armbruster '884 reference differs in the disclosure of the catalyst salt including the claimed species.” (See Office Action at 7.) Thus, the Examiner is relying upon *Armbruster '187* for its disclosure of metal salts. However, to the extent *Armbruster '187* may disclose metal salts, *Armbruster '187* discloses multivalent metal salts with “multivalent ions of manganese, zinc, cadmium, magnesium, cobalt, nickel, copper, tin, iron, lead, and calcium.” See *Armbruster '187*, col. 1, lines 49-54. *Armbruster '187* fails to disclose the substantially non-radioactive tracking materials of Applicants' claims. See *Armbruster '187*, entire disclosure. Nor has the Examiner provided any motivation to modify either reference to teach this limitation. Therefore, Applicants respectfully submit that the combination of *Armbruster '884* and *Armbruster '187*

fails to teach, suggest, or disclose all of the elements of independent claims 21 and 44, as amended, as required to obviate these claims.

Therefore, Applicants respectfully assert that independent claims 21 and 44 are allowable over the combination of *Armbruster '884* and *Armbruster '187*. Claims 29, 31, 45, 46, and 48 depend either directly or indirectly from independent claim 21 or 44 and thus include all the elements of the independent claim from which they each depend. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of this rejection with respect to claims 21, 29, 31, 44-46, and 48.

V. Remarks Regarding New Claims

In this response, Applicants have added new claims 49-53. Applicants respectfully submit that these claims are allowable. With respect to independent claim 49, each of the references cited by the Examiner fail to disclose “a substantially non-radioactive tracking material, wherein the substantially non-radioactive tracking material comprises at least one metal salt selected from the group consisting of: barium bromide, barium iodide, beryllium fluoride, beryllium bromide, beryllium chloride, cadmium bromide, cadmium iodide, chromium bromide, chromium chloride, chromium iodide, cesium bromide, cesium chloride, sodium bromide, sodium iodide, sodium nitrate, sodium nitrite, potassium iodide, potassium nitrate, manganese bromide, zinc bromide, zinc iodide, sodium monofluoroacetate, sodium trifluoroacetate, sodium 3-fluoropropionate, potassium monofluoroacetate, potassium trifluoroacetate, and potassium 3-fluoropropionate.” Claims 50-53 depend directly or indirectly from claim 49 and therefore include all of the limitations of that independent claim. *See* 35 U.S.C. § 112 ¶ 4 (2004). Therefore, Applicants respectfully submit that claims 49-53 are allowable.

VI. No Waiver

All of Applicants’ arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner’s additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art.

SUMMARY

In light of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants believe that no fees are due in association with the filing of this response. Should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to Baker Botts, L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.1133.

Respectfully submitted,



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